

APPENDIX A

Claims 1 through 5 and 7 through 13 (3 pages)

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1. A deposition chamber comprising:
 - a chamber body having a cavity formed therein;
 - a chamber lid configured to enclose the cavity;
 - a vapor delivery head positioned within the cavity;
 - a feedthrough device positioned in the chamber body, the feedthrough device having a longitudinal body portion and being configured to receive vapor from a vapor source and transfer the vapor therethrough along a pathway toward the vapor delivery head;
 - a heating device including at least one resistor element having at least a portion thereof disposed within a thermally conductive sheathing, the heating device including a nonheated section and a heated section, wherein at least a portion of the heated section is configured to conduct heat to the longitudinal body portion of the feedthrough device;
 - a layer of thermal insulation disposed between at least a portion of the thermally conductive sheathing of the heating device and the chamber body and substantially circumscribing the longitudinal body portion and the at least a portion of the thermally conductive sheathing, the layer of thermal insulation including at least a portion which is contiguous with at least one of a surface of the chamber body and a surface of the longitudinal body portion; and
 - a temperature sensing device disposed between the layer of insulation and the longitudinal body portion of the feedthrough device and configured to generate a signal representative of a temperature sensed thereby.

2. The deposition chamber of claim 1, wherein the feedthrough device includes a lumen defined therethrough for transferring the vapor therethrough.
3. The deposition chamber of claim 2, wherein the feedthrough device includes a continual helical groove formed on a surface of the longitudinal body portion.
4. The deposition chamber of claim 3, wherein the at least a portion of the heated section is disposed within the continual helical groove of the feedthrough device.
5. The deposition chamber of claim 4, wherein the continual helical groove is configured to complementarily receive the at least a portion of the heated section.
7. The deposition chamber of claim 1, wherein the thermally conductive sheathing is formed of stainless steel.
8. The deposition chamber of claim 1, wherein the temperature sensing device is disposed within the thermally conductive sheath.
9. The deposition chamber of claim 1, wherein the temperature sensing device includes a thermocouple.

10. The deposition chamber of claim 9, wherein the thermocouple is positioned within the thermally conductive sheathing.

11. The deposition chamber of claim 3, wherein at least a portion of the thermally conductive sheathing is configured to maintain the heating device in a substantially helical pattern complementary with the continual helical groove.

12. The deposition chamber of claim 1, wherein at least a portion of the thermally conductive sheathing is adhered to the feedthrough device.

13. The deposition chamber of claim 1, wherein at least a portion of the thermally conductive sheathing is welded to the feedthrough device.